

## **SOURCE INVENTORY**

### **CATEGORY #92**

#### **STERILIZERS**

### **1999 EMISSIONS**

#### *Introduction*

Ethylene Oxide is used extensively at large medical facilities in equipment sterilizers as well as in fumigators for the food industry. This category includes all emissions from medical sterilizers. The emissions are comprised of both ETO and CFC-12. ETO is the active compound with CFC-12 used as a handling gas. In the inventory, the CFC-12 is not included in the reactive emission totals.

#### *Methodologies*

##### **Point Source:**

This category contain point source emission data reported to the District's permitting department. The District updates the data each year on a source-by-source basis using as input:

1. Process material throughputs as reported by the companies
2. Emissions factors (these may be source specific factors reported by the companies through source test results or applicable general factors, i.e. from the EPA)
3. Emissions control factors (device-specific or general - these may supplied by companies also)

The county, month, and day factors are obtained from the data bank's information on each plant's location, seasonal usage, and days per week of operation.

##### **Area Source:**

The area source emissions account for non-permitted ethylene oxide emission sources. In 1987, about 206,000 pounds of ETO was estimated as area source emissions. Because most of these source are now permitted sources due to Regulation 11 Rule 9, the amount of area source emissions is estimated to have dropped to 1050 pounds of sterilizer gas. The point source emissions at present are less than 0.01 tons/day of reactive organics.

## **TRENDS**

#### *Historical*

Actual permitted data was used for Base Years 1987, 1990, 1993 and 1996. Previous emissions were estimated to follow population growth.

### *Growth*

Growth of ETO use in sterilizers is estimated to follow population growth.

The population data used for the above historical and growth profiles was obtained from two sources. The Association of Bay Area Government's (ABAG) "Projections" reports contained the information for the years 1980 to 2015. The "California Statistical Abstracts" contained the data for the years 1960 to 1979.

### *Control*

ETO is suspected of increasing the risk of stomach cancer and leukemia in humans. Because of this risk, the District adopted Regulation 11, Rule 9 on November 1, 1989. Note that this Rule is under Reg. 11, "Hazardous Pollutants".